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[54] **SIMPLIFIED DIGITAL PAD SENSOR**

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[58] **Field of Search** 178/18, 19, 20; 345/173, 175, 174

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[57] **ABSTRACT**

A touchpad sensor comprising a first plurality of electrically conductive strips positioned proximate to a second plurality of electrically conductive strips. The conductive strips in each plurality lie substantially in a single plane and the two pluralities are skewed relative to one-another in plan view. Ideally, the pluralities are aligned orthogonally. The conductive strips are separated by insulators that extend beyond the surface of at least one of the pluralities of conductors to separate the conductors of one plurality from the conductors of the other plurality until a localized pressure is applied to a region of the pad. When a localized pressure is applied, the conductors and insulators deform until a conductor from the first plurality forms an electrically conducting path with at least one conductor from the second plurality, which can be detected using banks of drivers and receivers.

19 Claims, 23 Drawing Sheets